#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-013412 Address: 333 Burma Road **Date Inspected:** 19-Apr-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Jhou Cheng/Sun Bo **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component: OBG/Tower Components** 

## **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, Hiranch Patel, was present during the times noted above for observations relative to the work being performed.

#### Bay#14

During random Quality Assurance Ultrasonic (UT) Inspection review of welds located on Segment 12AE Deck Panel weld, this Quality Assurance Inspector (QA) discovered the following issue:

- -UT performed by ZPMC UT technician using a transducer size that does not comply with the specifications of American Weld Society (AWS) D1.5 2002.
- -The transducer measured 9mm x 9mm.
- -ZPMC QC personnel have not produced an approved procedure to use 9mm x 9mm transducer.
- -The welds tested and accepted by ZPMC are identified as DP3005-001-039 and DP3007-001-009.
- -The welds are complete joint penetration (CJP) butt welds joining DP U-rib (RS3001C) to DP U-rib (RS3001E) on DP3005 and DP U-rib (RS3001C) to DP U-rib (RS3001D) on DP3007.
- -OBG Segment 12AE deck panels are located inside OBG bay#14.

The Notice of Witness Inspection Number (NWIT) is 005546.

For further information, please see the attached pictures below. Please see incident report on this date.

## Bay#16

This QA inspector performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The member is identified as

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Tower Components. The weld designations reviewed are as follows: -(WD1-A1-4, 5, 55, 54)

#### Bay#19

FCAW welding of weld joint USPL1-518/519-001, 002 located on USPL1-518/519. Welder is identified as 062761 (2G). ZPMC QC is identified as Zhou Cheng. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2232-Tc-U4b-F.

FCAW welding of weld joint USPL1-520/521-001, 002 located on USPL1-520/521. Welder is identified as 062807 (2G). ZPMC QC is identified as Zhou Cheng. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2232-Tc-U4b-F.

FCAW welding of weld joint USPL1-522/523-001, 002 located on USPL1-522/523. Welder is identified as 062752 (2G). ZPMC QC is identified as Zhou Cheng. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2232-Tc-U4b-F.

FCAW welding of weld joint USPL1-524/525-001, 002 located on USPL1-524/525. Welder is identified as 062783 (2G). ZPMC QC is identified as Zhou Cheng. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2232-Tc-U4b-F.

FCAW welding of weld joint USPL1-526/527-001, 002 located on USPL1-526/527. Welder is identified as 062786 (2G). ZPMC QC is identified as Zhou Cheng. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2232-Tc-U4b-F.

#### Bay#8

FCAW welding of weld joint BK004A6-058-112, 113 located on BK004A-058. Welder is identified as 210341 and 040785 (2F). ZPMC QC is identified as Zhang Qiao. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2132.

FCAW welding of weld joint BK004A7-058-057 located on BK004A-058. Welder is identified as 210341 (2F). ZPMC QC is identified as Zhang Qiao. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2132.

FCAW welding of weld joint BK004A7-058-058 located on BK004A-058. Welder is identified as 040785 (2F). ZPMC QC is identified as Zhang Qiao. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2132.

Unless otherwise noted, all observed on this date appeared to generally comply with applicable contract documents.

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# **Summary of Conversations:**

No relevant conversations.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By:	Patel, Hiranch	Quality Assurance Inspector
Reviewed By:	McClendon, Timothy	QA Reviewer